CHAPTER 9

Saudi Arabia: Measures of Transition from a Rentier State

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The purpose of this chapter is to assess the extent to which Saudi Arabia's long-term economic development strategy is meeting its objectives. Early on after the 1973–74 oil boom, the government decided that a high proportion of the country's oil revenues should be spent in a manner that would encourage private sector investment and production.[1] Part of a larger political/military strategy,[2] the economic component was to diversify the economy away from oil to the extent that self-sustaining growth could occur in the major non-oil sectors of the economy. Clearly, the goal is the creation of an economy capable of functioning independently of developments in the oil sector. This strategy was intended to provide more stability to the country's pattern of economic growth and development, and while several oil-producing countries express this desire, the Kingdom's planners put together a coherent investment strategy, focused on achieving this result.[3] At least publicly, the strategy has remained in place since the early 1970s.

While goals of this strategy seem straightforward, arriving at an objective assessment of progress made to date is extremely difficult. Examining the patterns of private sector growth does not necessarily come to grips with the issue. Output can expand simply through a continuation of government expenditures or momentum from past public allocations. If one could show that, over time, a linkage from private expenditures to private output was growing stronger than that of public expenditures to private output, then one might argue that the economy had evolved a bit, but that private expenditures themselves could not be sustained without a steady infusion of government funds. Conceptually, therefore, the methods by which one defines and measures oil independence are at the crux of assessing the success of the country's development accomplishments.

The chapter is divided into several parts. The first sections provide a brief overview of the macro-economy. Trends in output and expenditure are examined, and the more relevant patterns identified. Several linkages are made to earlier studies of the country's growth mechanisms.[4] The second part of the study

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develops an operational test for measuring the extent to which the private sector is replacing government expenditures as the prime mover of the non-oil sector. Relatively new statistical techniques are introduced, including co-integration and error correction, to shed light on various issues. Based on this discussion, particular statistical tests are devised to measure changes over time in the Kingdom's economic mechanisms. Ultimately, these tools are used to ascertain whether the public sector is becoming less dominant and in what sense, and whether the private sector is showing that it is now primarily responsible for large segments of non-oil sector growth. Once these questions are properly assessed, and based on the results of this analysis, the final section discusses several policy implications.

Patterns of Growth and Expenditure, 1964–1998

Saudi Arabia has experienced periods of remarkable growth and other periods of relative stability and even decline. For the 1964–98 period as a whole, gross domestic product (GDP) at constant prices increased at an average annual rate of 5.7 percent, but with private sector GDP and non-oil GDP increasing at an even faster 6.8 and 6.7 percent, respectively (Table 9.1). Public expenditures experienced a sharp deceleration, increasing by double digits in the 1964–80 period, but with negative rates associated in investment and non-defense disbursements during the subsequent period. Private expenditures were a bit more stable, but these too experienced a general downtrend in the latter time periods.

Several other patterns emerge out of these data. First, after an initial surge following the 1973–74 oil price increases, public sector investment/infrastructure expansion was flat, actually experiencing a fairly large (-6.4 percent per annum) contraction over the 1980–98 period. Second, public consumption was the only major category of governmental expenditures to indicate a positive rate of growth in the post-1980 period. Third, of major government expenditure categories, defense was the fastest-growing sector during the last decade (1989–98). Fourth, and in contrast, private sector investment generally expanded more rapidly than consumption over the 1980–98 time frame. Fifth, the general pattern of private sector expenditures was considerably more stable than those of the public sector. Sixth, construction was by far the most volatile sector, growing at an average annual rate of 42.3 percent during the 1964–80 period, but at a -0.3 percent rate during the 1980–98 period. Finally, and ironically, one of the fastest-growing sectors, agriculture, was the one in which the country enjoyed the least natural advantages.

Despite Riyadh's persistent efforts to diversify the economy away from oil, the hydrocarbon industry is still dominant in several important regards. Oil production still accounts for roughly 30 percent of GDP, 90 percent of exports, and 70 percent of budget revenues. Therefore, the economy remains highly vulnerable to fluctuations in international oil markets. This is readily apparent, as in 1998, when nominal GDP contracted by 12 percent, mainly due to a 25–year low price of Arabian Light, the benchmark Saudi crude, averaging below $12 a

Table 9.1 Saudi Arabia: Rates of Growth, 1964–1998 (average annual %)

Sector	1964-1998	1964-1980	1964-1989	1974-1998	1980-1998	1989-1998
SECTOR OUTPUT						
Agriculture	5.3	3.4	6.7	6.9	6.9	1.5
Mining	6.7	12.9	8.8	3.9	1.6	1.2
Manufacturing	9.4	14.8	12.0	7.4	4.9	2.6
Electricity, Gas, Water	6.3	13.6	7.8	7.0	0.3	3.2
Construction	14.8	42.3	18.4	7.9	–0.3	4.3
Wholesale, Retail Trade	7.6	14.6	10.1	6.5	1.7	1.1
Transport, Communications	11.8	23.9	15.9	5.7	7.8	1.3
Ownership of Dwellings	5.5	13.1	7.1	2.3	–0.8	1.2
Finance, Insurance	5.6	9.6	7.8	4.5	1.0	0.7
Services	5.3	7.2	7.2	4.7	2.9	1.2
TOTAL OUTPUT						
GDP	5.7	11.0	6.7	3.1	1.2	3.0
Oil GDP	4.3	10.0	3.8	0.7	–0.5	5.8
Non-Oil GDP	6.7	11.7	8.5	5.2	2.3	1.8
Private Sector GDP	6.8	11.4	8.7	5.6	2.9	1.5
Public Sector GDP	6.4	12.5	7.8	4.4	1.2	2.6
PUBLIC EXPENDITURES						
Investment	5.8	21.4	8.9	0.4	–6.4	–2.3
Infrastructure	5.7	19.2	7.6	2.2	–5.0	0.6
Consumption	7.8	15.0	10.6	4.3	1.8	0.5
Defense	8.7	21.0	11.1	4.7	–1.1	2.5
Non-Defense	5.1	15.7	8.5	3.2	–3.5	–3.7
Total National Account	6.3	14.6	8.6	3.9	–0.5	0.1
PRIVATE EXPENDITURES						
Investment	7.2	5.9	8.4	4.1	2.3	1.2
Consumption	6.4	12.5	8.6	5.0	1.3	0.5
Total Private	6.6	12.6	8.6	4.8	1.5	1.2

Source: Saudi Arabian Monetary Agency, Annual Report, various issues.

barrel. After the early 1999 market rally, the whole atmosphere of the country has dramatically changed, from one of frustration and despair to that of confidence and optimism.[5]

On the other hand, the differential growth rates noted above have created major structural shifts in the Saudi economy during the last several decades. In particular, the share of agriculture in (non-oil) GDP increased, from 8.1 percent in 1975 to 13.4 percent in 1998. This stands as a clear difference, with similar trends in most developing countries. Similarly, manufacturing showed a steady expansion, from 5.5 percent of non-oil GDP in 1975 to 9.5 by 1998. Non-oil GDP also experienced a steady expansion, increasing from 36.5 percent of GDP before the 1970 oil boom to nearly 70 percent by 1998. With regard to public

expenditures, investment showed the most dramatic change, falling from 12.9 percent of GDP in 1980 to 5.9 percent in 1998. In contrast, public investment was only 5.3 percent of GDP before 1970, and public consumption increased from 16.8 percent of GDP in 1970 to 33.1 percent in 1998. As noted above, defense expenditures remained relatively high, at 12.6 percent of GDP. This was up from 7.4 in 1970 but down from 16.0 in 1990. Non-oil revenues were still quite low, accounting for only around 8.7 percent of GDP, although this was up from 0.9 in 1970. Private investment showed good progress, increasing from 5.1 percent of GDP in 1970 to 12.6 percent in 1998. Still, compared with countries in the same income range, Saudi Arabia has a higher share of GDP allocated to consumption and a lower share to investment when private and public expenditures are combined (Table 9.2).

The public sector budget has also undergone considerable structural change, with detailed and consistent budgetary data available starting in 1979 (Table 9.3).

The most dramatic gains in budgetary share were in the area of human resource development. This expenditure category increased its budgetary share from around 8.5 to over 23 percent by 1998. Health and social development expanded faster than the overall increase in budgetary allocations as well, increasing their share from 4.6 in 1997 to 8.4 in 1998. Interestingly enough, these two categories were the only ones averaging a positive growth rate (2.8 for human resource development and 0.6 per annum for health). The biggest budgetary declines were in transport and communications (–7.3 percent per annum), economic resource development (–6.8), and infrastructure (–7.7). Other major contractions were in government lending institutions (–20.2 percent) and public administration (–4.3 percent). Defense, although growing at an average annual rate of –0.3, still increased its share from 26 percent in 1979 to nearly 40 percent by 1998. Given these patterns, and together with the fact that the total budget contracted at an average annual rate of 2.5 percent, several sectors were clearly more "protected" than others. According to reliable studies, the manner in which countries protect selected components of the budget during periods of austerity indicates that defense and civil service sectors are far more vulnerable.[6]

In fact, the average decline in the growth of real government expenditures was 13 percent.[7] Associated with this decline was a contraction of only 5 percent in the social sectors (producing a vulnerability index of 0.4). By contrast, the index was 0.6 for the administrative and defense sectors, and over 1 percent for production and infrastructure. In short, the various social sectors were less vulnerable to cuts than defense and administration, which, in turn, were considerably less vulnerable than production and infrastructure, contrary to the generally accepted view.

The fact that social sectors and defense were both relatively protected suggests that there were high political costs associated with reducing them. On the other hand, several countries in various case studies appeared to have been more willing to cut spending on infrastructure and production, which, of course, is likely to have adverse implications for longer-term growth, but few early direct and immediate costs.

Saudi Arabia appears to fit this pattern fairly well, although some of the King-

Table 9.2 Saudi Arabia: Economic Structure, 1970 – 1998 (average annual %)

Sector	1970	1975	1980	1990	1995	1998
SECTOR OUTPUT (% NON-OIL GDP)						
Agriculture	12.7	8.1	6.1	13.9	13.6	13.4
Manufacturing	6.0	5.5	6.0	8.6	8.8	9.4
Mining	0.6	0.7	0.5	0.5	0.5	0.5
Refining	16.9	9.0	6.2	9.1	12.9	13.0
Electricity, Gas, Water	3.7	2.3	3.9	3.3	3.7	3.8
Construction	11.9	21.9	20.0	9.1	8.8	9.0
Wholesale, Retail Trade	13.1	15.4	22.4	20.5	20.2	20.1
Transport, Communications	18.3	10.4	11.9	11.6	11.5	11.3
Ownership of Dwellings	8.6	12.8	11.5	6.6	6.6	6.6
Finance, Insurance	4.5	4.5	5.0	4.2	4.0	3.9
Services	3.1	2.4	2.1	2.3	2.2	2.2
TOTAL OUTPUT (% GDP)						
Oil GDP	63.5	71.1	69.6	38.0	37.2	30.2
Non-Oil GDP	36.5	28.9	30.4	62.0	62.8	69.8
Private Sector GDP	25.9	17.3	17.1	36.1	36.5	40.6
Public Sector GDP	10.7	11.6	13.3	25.9	26.1	29.2
Public/Private Output (% non-oil GDP)						
Private Sector GDP	70.2	59.8	56.3	58.3	58.1	58.2
Public Sector GDP	29.8	40.2	43.7	41.7	41.6	41.8
PUBLIC FISCAL (% GDP)						
Investment	5.3	10.7	12.9	11.0	5.3	5.9
Consumption	16.8	17.6	15.8	31.2	26.1	33.1
Defense	7.4	9.1	13.3	16.0	10.5	12.6
National Account Expenditures	22.2	28.3	28.7	42.2	31.4	39.1
Budgetary Expenditure	26.9	19.5	36.4	46.7	31.8	34.9
Oil Revenues	24.2	57.5	36.5	28.7	21.5	28.9
Non-Oil Revenues	0.9	3.6	4.2	12.4	7.1	8.7
PRIVATE EXPENDITURES (% GDP)						
Investment	5.1	6.5	5.5	7.0	11.4	12.6
Consumption	28.4	14.6	22.2	40.5	41.1	42.2
Total Private	33.5	21.1	27.7	47.5	52.5	54.8

Source: Saudi Arabian Monetary Agency, Annual Report, various issues.

dom's budgetary categories do not overlap with the standardized International Monetary Fund (IMF) categories used by Hicks and Kubisch. In the Saudi case, three groups of budgetary items emerge, starting with highly favored categories, including those in the bottom part of Table 9.3 (in brackets), which actually expanded in real terms while the budget contracted; second, sectors that contracted at a slower rate than the overall budget and had an elasticity of less than 1; and finally, sectors that contracted at a rate more rapid than the overall budget (having an elasticity of greater than 1).

Table 9.3 Saudi Arabia: Public Sector Budget, 1979–1998 (average annual %)

Sector	1979	1985	1990	1995	1998
BUDGETARY SHARES (% TOTAL BUDGET)					
Human Resource Development	8.46	12.27	15.58	17.94	23.21
Transport & Communications	11.31	7.25	4.70	4.13	4.35
Economic Resource Development	6.89	4.54	2.56	2.57	2.97
Health and Social Development	4.55	6.45	6.82	6.77	8.36
Infrastructure Development	3.13	3.46	1.37	0.93	1.1
Municipal Services	5.88	5.95	3.31	3.25	3.34
Defense and Security	26.12	31.98	34.32	33.00	39.91
Public Administration	18.04	19.29	27.96	26.47	12.79
Government Lending Institutions	11.46	4.65	0.59	0.32	0.26
Local Subsidies	4.16	4.17	2.8	4.61	3.71
BUDGETARY GROWTH (% AVERAGE ANNUAL RATE)					
Human Resource Development	2.8	2.6	3.1	–4.1	3.3
Transport & Communications	–7.3	–10.5	–9.0	–9.2	–2.7
Economic Resource Development	–6.8	–10.0	–13.2	–6.7	0.1
Health and Social Development	0.6	2.2	–1.5	–6.9	0.8
Infrastructure Development	–7.7	–1.9	–19.1	–13.7	–4.3
Municipal Services	–5.4	–3.4	–13.4	–7.1	–1.6
Defense and Security	–0.3	–0.3	–1.2	–7.5	0.2
Public Administration	–4.3	–2.5	4.9	–7.8	–10.9
Government Lending Institutions	–20.2	–17.0	–35.5	–17.7	0.0
Local Subsidies	–3.1	–3.5	–10.1	3.0	1.8
Total Budget	–2.5	–3.6	–2.6	–6.8	–1.7
BUDGETARY GROWTH (ELASTICITIES)					
Human Resource Development	[0.51]	[0.72]	[1.19]	0.60	[1.94]
Transport & Communications	2.92	2.92	3.46	1.35	1.59
Economic Resource Development	2.72	2.78	5.08	0.11	[0.06]
Health and Social Development	[0.24]	[0.61]	0.58	1.01	[0.47]
Infrastructure Development	3.08	0.53	7.34	2.01	2.53
Municipal Services	2.16	0.94	5.15	1.04	0.94
Defense and Security	0.12	0.08	0.46	1.10	[0.12]
Public Administration	1.72	0.69	[1.88]	1.15	[6.41]
Government Lending Institutions	8.08	4.72	13.65	2.60	0.00
Local Subsidies	1.24	0.90	3.88	[0.44]	[1.06]

Source: Saudi Arabian Monetary Agency, Annual Report, various issues.

For the period as a whole, and for most of the sub-periods, human resource development, health, and social development fall in the highly favored category. Defense is usually favored, and in the 1990s it, along with public administration, was highly favored. Most of the economic sectors were not favored, with contradictory budgetary shares.

The patterns reported above are consistent with an earlier study of Saudi Arabian budgetary allocations using regression analysis.[8] That study concluded that only several sectors were able to increase their budgetary shares during periods

of unintended budgetary deficits. These were: human resource development, health, and social development. They were also the only sectors to have their budgetary shares increase during periods of increased actual (realized) budgetary deficits. Moreover, human resource development and health did not have their shares expanded with increases in expected revenue. This finding is consistent with the notion that their funding levels were assured just because of high priority. Thus, marginal increases in revenue could be safely used by the authorities to fund lower-priority projects.

Equally important, the deficit-related expansion in human capital seems to have come in part at the expense of longer-term investment in economic capacity. Specifically, transportation and communications, economic services, and infrastructure all had their budgetary shares contract during periods of unexpected and actual deficits. In general, the main findings of this study confirm the high priority granted human resource development by Saudi authorities. Resources allocated to this sector have been preserved, relative to competing sectors, during periods of austerity. To be sure, budgetary cuts have occurred in Saudi Arabia, but education has been spared. The long-term nature of this commitment is further evident by the fact that it appears relatively safe from budgetary cuts when overall disbursements cause deficits. The same could be said for health and social expenditures. Finally, while defense has regained its leading share of the budget during the recent period of relative fiscal austerity, Riyadh does not appear to have fallen into the guns versus education syndrome. In fact, both types of expenditures appear to complement each other in the minds of Saudi budgetary authorities.

Because of its importance to the economy, budgetary dynamics and tradeoffs associated with defense expenditures have received special attention. In particular, the impact of defense expenditures on the economy revealed that budgetary tradeoffs were often more complex than those associated with other categories.[9] In part, this simply reflects differences in budgetary priorities across countries. However, this complexity also stems from the fact that increased levels of government deficits can offset or reinforce the impacts that expanded defense expenditures have on other budgetary shares. Further analyses indicate that defense/socioeconomic tradeoffs varied considerably depending on whether the country had an environment characterized by high or low levels of military expenditures. This usually occurs in both the central government budget and in relation to the overall size of the economy. During the 1980s, for example, defense expenditures in these two environments had a differential impact on economic growth as well. In high defense expenditure countries, increase in the share of resources allocated to that sector did not provide any appreciable stimulus to the economy. For those countries, defense increases in central government budgets actually tended to reduce the overall rate of growth. In low defense countries, however, defense increases did provide a positive stimulus to economic growth. Furthermore, increases in the share of defense did not retard that growth.

There are several explanations for these patterns. In the Middle East at least, high defense countries appear to cut economic expenditures, to free up resources for further expansion of the military. This may occur because of the

political costs in cutting non-defense expenditures, particularly over long periods of time. Again, with several exceptions, low defense countries seem to have more flexibility in accommodating increased levels of military expenditure. As a result, economic programs may not be as susceptible to cuts in these instances. Long-run costs, associated with the manner in which Middle Eastern countries alter budgetary shares—to accommodate increased military expenditures—may also be a key factor. For high defense countries as a whole, increased budgetary shares throughout the 1970s had a positive impact on growth in the 1980s. Yet, increased shares to defense in the 1980s impacted negatively. Given the observed lagged nature of many negative impacts in these countries, this may indicate the neglect of economic services, infrastructure, and the like. If that is the case, countries like Saudi Arabia may be finding that high defense burdens are starting to take a heavy toll on economic growth. If these lagged impacts are stable, one can expect non-oil GDP growth to expand at rates somewhat below its long-run growth path. Indeed, for the Kingdom, a reorientation of budgetary priorities may not provide an immediate stimulus to the economy.

Although a leading Saudi political economist has painted a slightly brighter picture than the one summarized above, our findings are consistent with each other.[10] In the Saudi analyst's own words,

> What was surprising in Saudi Arabia's response to the challenges of the past decade is not merely the relative effectiveness of the state's responses but the minimum political costs they entailed. This suggested a degree of resiliency by the Saudi state that was much greater than could be expected for rentier states.

The author also noted that three areas in particular required further attention, including,

> (1) The domestic extraction capabilities of the state, [which] are still insufficient [and] almost entirely dependent on indirect taxation. Other Gulf states have already taken the important step of introducing personal income taxes to much demands; (2) the legal system and the official statistical base need[ed] urgent reforms if official plans to invite external investments [we]re to be realized; and (3) there [wa]s a need for the privatization program to proceed at a quicker rate and with greater transparency."[11]

Clearly the Saudi budget has changed considerably over the years. While the fall in expenditures is the most dramatic manifestation of this phenomenon, the more subtle and less publicized shift in the composition of expenditures is perhaps just as significant in our understanding of the country's growth dynamics. If, for example, a decline in the ability of governmental expenditures—to stimulate the non-oil sector—was recorded, it would be logical to ask whether this occurred because of some sort of diminishing returns to public expenditures. Equally important, was the cause of such a decline the result of changes in the composition of specific expenditures?

Criteria and Tests of Non-Oil Development

To examine the possible linkages between public and private sector expenditures on non-oil production in Saudi Arabia, a co-integration error-correction analysis was undertaken. While mathematically technical, this method has a straightforward intuitive appeal.[12] Co-integration/error-correction formulae are attempts to determine whether two series (such as private expenditures and sector output) move together over long periods of time.[13]

The analysis accepts the fact that short-run shocks can occur, whereby rapid increases (i.e., public sector investment) in one variable cause movement in the other (i.e., construction). However, if the two variables have developed a long-run linkage, whereby an ongoing stable set of links have been established, then equilibrium will be restored, with the speed of adjustment affected by the deviation from that long-run pattern. Specifically, the speed of the longer-term adjustment will be dependent on the magnitude of the deviation from the long-run equilibrium pattern, as well as the strength of the linkage between the two variables. In short, the year-to-year growth of a sector such as non-oil manufacturing can be divided into two parts: the first associated with a short-run shock (increased public-sector consumption), and the second drawing on the longer-term linkages established with the causal variable (here public sector consumption).

The technique has been used successfully to assess several other facets of Gulf economies. For example, Al-Yousif's study of exports and economic growth in the region found that in the case of Saudi Arabia, Kuwait, the UAE, and Oman, there are no long-run relationships between exports and economic growth.[14] On the other hand, the study found that exports have had a positive and significant shorter-run impact on growth in all four countries. No doubt, one reason the long-run relationship did not hold up is because the significant relationship is not between exports per se, but how receipts are spent (invested) by respective governments. Moreover, and while highly dependent on oil, these Arab Gulf countries have been engaged in efforts to diversify their domestic economies and the structure of their trade. Apparently, these efforts have been successful in the sense that the economies are now capable of some measure of growth, independent of developments in the oil sector.

In another study of Saudi imports, the duration of import volume adjustments to changes in the explanatory variable was determined to be approximately two years.[15] This interval seems to be longer than that obtained by others. In one leading analysis, the long-run money demand function of GCC countries, using Johansen's co-integration methodology, was determined to have a nominal effect.[16] However, this occurred only in the Saudi case. In contrast, the results indicate the presence of a long-run demand function for broad money for Saudi Arabia and the UAE, when real GDP, interest rates, price levels, and nominal effective exchange rates are included in the system. Thus, the modeling of money demand in Saudi Arabia and Bahrain, should be done in real terms. In other words, the additional international interest rate variable plays an important role in determining the demand for money in Saudi Arabia, the UAE, and Bahrain.

In general, these studies demonstrate that the technique is capable of yielding

insights not often captured by the more conventional regression methods. A common theme is that economic development in the Gulf is becoming a more complex process as the economies mature and begin to diversify away from a complete reliance on oil revenues and associated public sector expenditures. For the purposes of this study, the technique appears capable of developing a new, operational way to assess the extent of diversification from a rentier state.

In the early phases of economic development in oil-based countries, the expansion of many types of sectoral growth is highly dependent on government expenditures. One sign of achieving a diversified, self-sustaining economy should therefore be the severing, or at least the weakening, of the longer-term linkage with public expenditures. Ideally, these would be replaced by a similar linkage to the expansion of private sector production. Specifically, when and if the Saudi non-oil economy develops to the point at which its growth can occur independently of government expenditures, then one may conclude that it has graduated from a pure oil economy. Conventional regression analysis would not be able to make these distinctions, because short-run growth spurts associated with government expenditure shocks often mask the possible weakening of its longer-term links to the non-oil economy.

Accordingly, a proposed development classification scheme for non-oil sectors in Saudi Arabia may include four specific constants: first, beginning stages, when weak or non-existent long-term links with public and private expenditures affect non-oil output (short-term links may be present in this constant); second, a partial integration stage, when development of longer-term links with public expenditures, and possibly short-term links with private expenditures, further affect non-oil output; third, an integrated stage, when strong links are established with private expenditures (in this instance, possible government involvement with strong links to one or more major expenditure categories may be present. The result would be a possible weakening of short-term links); finally, a mature stage, which weakens long-term government linkages and maintains long-term linkages with private sector production.

To these we might add a final self-sustaining stage in which all long-term links to the public sector have been broken, while at the same time strong long-run links have been forged with private sector demand and/or output. As with all stage theories of economic development, a major area of controversy might center on how one moves from one stage to another. Is economic reform a key element? Is the composition of private sector investment critical, and if so, in what way? While these questions are largely beyond the scope of this study, the results below do shed some light on the subject.

Results

The first step in the analysis was to examine the impact that various types of public expenditure, including investment, consumption, defense, and total budgetary allocations, have had on private sector GDP (Table 9.4).[17] The main findings revealed that:

atterns have varied over time, with a general weakening of links to public
xpenditures;

ı particular, and with the exception of public investment, no type of pub-
c sector expenditure was statistically significant (at the 95 percent level) in
ıe most recent (1974–98) time period;

ı contrast, public investment, defense, and total public expenditure's short-
:rm link with private GDP had been statistically significant at the 95 per-
:nt level in the earlier (1964–1989) period;

ıe long-term impacts also show a weakening. This is evidenced by the
:clining size of the coefficient on the error-correction term (the size of
ıe coefficient indicates the strength of adjustments to the long-term pat-
:rn). For total public expenditures, the 1974–1998 coefficient was over
ılf (0.33 vs. 0.15) of its 1964–1989 value. Moreover, long-term private
ıvestment gross domestic product was barely significant at the 95 percent
vel, while it had been highly significant in the earlier period;

›inciding with the weakening of longer-term public sector links (a major
ıurce of private sector demand), private consumption was strengthened,
creasing the statistical significance of its long-term adjustment with that
ıriable from 90 percent in the first period to over 95 percent in the second.

).4 Saudi Arabia: Influence of Public Expenditure on the Private Sector Economy

	Short-Run Impact		Error-Correction Term		
e	1964–1989	1974–1998	1964–1998	1964–1989	1974–1998
Sector GDP					
lic Investment	†	†	–0.03 (–4.74)†	–0.04 (–4.10)†	–0.03 (–2.12)†
c Consumption	★	ins	–0.10 (–3.59)†	–0.24 (–6.93)†	–0.10 (–3.03)†
ıse	†	★	–0.04 (–2.61)†	–0.11 (–7.28)†	–0.07 (–5.12)†
Public :nditures	†	★	–0.14 (–2.50)†	–0.33 (–7.26)†	–0.15 (–2.37)†
:e Consumption	★	★	–0.11 (–2.10)†	–0.15 (–1.95)★	–0.15 (–2.50)†

ıta from Saudi Arabian Monetary Authority, Annual Report, various issues. All variables in 1969 prices. Error-correction estimations equilibration performed using Pesaran, M. H., saran. Microfit 4.0: Interactive Econometric Analysis. Cambridge: Camfit Data Ltd, 1997.

ıtistic; ins = statistically insignificant; ★ significant at the 90% level; † = significant at the

To assess the extent to which this general pattern held up across various non-oil sectors of the economy, a similar analysis was undertaken for the various sectoral components of GDP, including agriculture, mining, construction, manufacturing (non-refining), transport, power, finance, services, and the like. For purposes of classification, our examination also focused on whether or not public expenditures were losing their stimulating effects on output, as well as whether these expenditures were being replaced by private expenditures. In the latter case, which type of private expenditure proved most effective was also deciphered. Of course, if private sector expenditures themselves remain highly linked to government disbursements, then the economy is not really becoming all that self-sufficient. Hence, a final set of error-correction tests were performed on the links between public and private expenditures, to assess the extent to which private sector expenditures have become less dependent on public expenditure allocations.

Agriculture

For the agricultural sector, the analysis suggests a general weakening of public sector expenditures with time. This is evidenced by the statistically significant short-term impacts of non-defense expenditures and total budgetary expenditures in the 1964–89 period, giving way to statistically insignificant impacts in the 1974–98 period. In fact, in no case did any of the major categories of public sector expenditures have a statistically significant impact on short-run output during the 1974–98 period.

The longer-term pattern was even weaker. While consumption and defense appear to have a stable long-term pattern for the period as a whole, their links with the pattern of long-term agricultural growth during the 1974–98 period is only marginally (90 percent level) significant.

Anyone remotely familiar with Saudi Arabia knows the extent to which government subsidies and other supports have helped expand the Kingdom's agricultural sector. As noted in Table 9.3, there is a good chance that many of the government's initial programs have been scaled back. It is safe to conclude, therefore, that public expenditures are currently playing only a tangential role in stimulating further agricultural output. This may have been the case for some time.

A very different picture emerges for private expenditures. Here, all of the major categories—investment and consumption as well as total expenditures—increase their statistical significance with time. This is particularly true for short-term impacts in which all three categories had a statistically insignificant jolt on agricultural production in the earlier period. This changed to a positive and highly significant impact in the latter period. In addition, the long-term coefficients of adjustment did not decline with time, indicating that output in this sector has maintained a fairly constant expansion in line with private expenditures.

It is not clear whether this is a success story for the government. One interpretation might be that the declining government short-run (subsidy) impact is no longer necessary, after accomplishing its original objectives. These programs have hence been cut back and are no longer necessary to assure that sector's

continued expansion. Looking at expanded non-oil output as a source of stimulus for the agricultural sector, it appears that none of the major categories—non-oil GDP and its components, private GDP and public GDP—have had a short-run impact on agricultural output. Yet, all three have established a long-term relationship with the sector. The coefficients on the error adjustment term suggest however that the links with private sector GDP are much stronger than those associated with increases in public sector GDP. In addition, the private sector coefficients have strengthened over time (increasing from 0.10 in 1964–89 to 0.15 in 1974–98), while public sector links have remained rather constant (at 0.03 to 0.04).

Non-Oil Manufacturing

A fairly clear picture unfolds for the critical non-oil manufacturing sector. Here, a general weakening of links between public expenditures and output was observed. The pattern has developed in both the short and the longer term. For the short term, only defense remained statistically significant (95 percent level) in the latter period. For the longer-term patterns, consumption, defense, non-defense, and total budgetary expenditures formed a statistically significant long-term relationship with non-oil manufacturing in the 1964–89 period. By 1974–95 these patterns had broken down, with no statistically significant (95 percent level) links remaining.

The role of defense is hard to explain. Links may be associated with the Kingdom's defense procurement offset program and might account for the short-run impact, but with little carry-over to a stable long-term connection.

A totally different picture emerges for the private sector. Not only were the three main expenditure categories—investment, consumption, and total expenditures—statistically significant in both short-term periods, they were also statistically significant in the long term as well. Here, however, it should be noted that there was a general weakening of the longer-term links with time, supported by the decline in the value of the error-correction coefficient. Again speculating, the very limited impact of public sector investment in affecting growth of the non-oil manufacturing sector may, in turn, be a reflection of the limited role of this type of expenditure in increasing the productivity of private sector investments. This being the case, the productivity of private sector investments in this sector may be declining. For the major components of GDP, anóther picture emerges, with increases in private sector GDP providing a short-run stimulus to non-oil manufacturing output. Yet, private sector GDP has failed to establish any long-term stable pattern of expansion with non-oil manufacturing. Given manufacturing's stable long-term relationship with the private sector, one must conclude that the Saudi Arabian non-oil manufacturing sector largely caters to final demand, with little output entering into intermediate stages of private sector production. This pattern is fairly common at early stages of industrialization. No doubt the true test of the success of the country's industrialization program will be whether or not activity spreads into the intermediate and capital stages of production. There is little evidence of this occurring to date.

Minerals and Mining

Saudi Arabia's mineral and mining sector is still a negligible segment of the non-oil economy. However, it does have the potential for rapid growth, as new mineral and ore discoveries are beginning to attract considerable attention. Historically, the public sector has had strong ties to this area, although there are signs that these may be weakening. Public investments, for example, which had statistically significant links to the sector in the 1964–89 period, found these disappearing in the more recent 1974–98 period. There were also fairly considerable declines in the size of the error-correction coefficient over time for both public consumption and defense expenditures. Private expenditures, on the other hand, appear to have strengthened their ties to the mineral and mining sector. Both private consumption and total private expenditures evolved from no short-run statistical links in the early period to highly significant ties in the latter. In contrast to the general pattern experienced by public expenditures, the size of the error-correction coefficient increased considerably in the case of private consumption and total private expenditures.

Construction

No other sector epitomizes oil-fueled expenditures more than construction. Few can forget the images of 24-hour crash building programs in the years immediately following the 1973–74 oil boom. There is no doubt that in these initial years, output was driven almost exclusively by government infrastructure expenditures. This is clearly confirmed by the error-correction analysis indicating a strong link between public sector investment and construction activity. Still, contrary to what one might imagine, this association appears to be strengthening with time, as indicated by the fact that the size of the coefficient—on the error-correction term—nearly doubled during the latter 1974–98 period. Moreover, government consumption formed an extensive, albeit weak, long-term link in the latter period, where one was not present earlier.

An even more interesting situation arises with private sector expenditures. Here, it appears that for the first time, construction activity was not just fueled by government expenditures. Private investment, consumption, and total expenditures shifted from a strong long-run statistical link with the construction sector in 1974–98, where none had existed previously. Construction's links with real output also appear to have strengthened over time. Both public and private GDP formed no strong long-term links with the sector during the 1964–89 period. Nevertheless, both developed these patterns in the subsequent period. Based on the size of the error-correction coefficient, the link with private sector GDP was considerably stronger than that associated with public sector output. In addition, both public and private sector GDPs maintained strong short-term links to construction activity during both time periods.

Summing up, construction is not dominated by public sector activity, as in the past. Yet, it is apparent that in many ways the sector is still quite closely tied to the fates of government expenditures. On the other hand, there are clear indications that important links are being forged with the private sector. In the future, greater diversification of sources of stimulus should provide the sector with

more stability than it has had in the past. While the boom-or-bust days are not completely over, it is apparent that the private sector is now able to pick up some of the slack when government expenditures contract sharply.

Wholesale and Retail Trade

The trade sector also shows the declining influence of government expenditures. During the 1964–89 period, public investment, consumption, defense, and (at the 90 percent level) total budgetary expenditures all formed long-term relationships with the sector. By 1974–98, however, only consumption retained its links, and, based on a decline in the error-correction coefficient from 0.25 to 0.10, at a considerably weakened amount. Still, several public sector expenditures, including investment, defense, and total budgetary expenditures, were able to affect output in the sector over the short run.

Surprisingly, private sector patterns did not strengthen with time. This is an area in which one might anticipate that increased incomes and spending patterns throughout the Kingdom would be reflected in a rapidly expanding demand for retail goods and services. While it is true that the private sector did create ties to this sector early on, there is little evidence that they have strengthened with time. In fact, the long-term links between private sector investment consumption and total expenditures actually weakened during the latter 1974–98 period, though not quite to the extent of those expenditures associated with the public sector. Similar patterns occurred with real output. Both private and public GDP formed short- and long-term links with the sector, but there was a decline in the strength of the long-term relationship with the passage of time.

Electricity, Gas, and Water

This sector is currently experiencing great changes with privatization, together with plans for increased investment and output. A complicating factor is that investment in the sector has lagged in recent years. Indeed, Riyadh now estimates that this industry alone will require an investment of $80 billion over the next 20 years, to cater to the country's rapidly growing population,[18] meaning that demand factors per se have been modified by capacity constraints.

As with several of the other sectors, public expenditure appears to be having less and less of a long-term effect on the sector's fortunes. Early on, the sector had formed statistically significant long-term bonds with government investment, consumption, defense, non-defense, and total budgetary expenditures. By 1974–98, only consumption maintained this link at a 95 percent level of confidence (and then at greatly diminished strength).

Private expenditures also formed early links with the sector. While these declined slightly in the second time period, they are currently much stronger than those derived from public expenditures. In recent years, private consumption has also forged a strong short-term bond with the sector. As for production links to the sector, the pattern is clearly one of strengthening longer-term ties with time, for both the non-oil economy as well as public GDP. Non-oil GDP lost its short-term link with the sector, even if this was clearly offset by the dramatic increase in the sector's long-term coefficient (0.22 to 0.73). The power

sector stood out as the most promising for private investments. While public expenditures still play a role in stimulating output, private sector demand, along with non-oil GDP, appears to provide a capacity to rapidly control the pace of expansion.

Transport and Communications

The patterns of expenditures/output on the transport/communications sector resemble those characterizing the power sector. Both public and private expenditures have played and continue to play an important role in affecting their expansion. There are several subtle differences, however. The short-term links associated with public sector expenditures have been consistently strong and are present more or less across the board. With the exception of defense expenditures in the earlier period, every type of public expenditure has had a strong short-term link to the sector's output. The long-term impact of public expenditures has somewhat weakened with time, in the sense that fewer categories have retained their statistical association with the sector's output. By 1974–98, public investment was no longer statistically linked with the sector's long-run movements. Also, in the latter period, non-defense expenditures declined in statistical significance. Offsetting these developments has been the slight increase in public consumption's long-term impact on the sector's growth.

Private sector links to the transport/communications area have, in general, strengthened over time. While the long-term link to private investment has weakened in recent years, both private consumption and total private expenditures have strengthened their long-term links to the sector's output. The latter two expenditure categories have also maintained their strong short-term links to the sector. Output links also appear to be strengthening. Non-oil GDP, public GDP, and private GDP have all experienced increases in the size of their long-run coefficient. At the same time, public GDP no longer has a short-term impact on the sector's output. The transport and communications field is another sector that appears to be undergoing a gradual shift from public sector demand-led growth to that associated with developments in the private sector. This development is occurring both in terms of expenditures as well as in terms of the strong links being forged with private-sector GDP.

Financial Sector

Since the end of the 1991 Gulf War, the consolidated balance sheet of Saudi Arabia's banks has grown steadily, at an average annual rate of around 6.2 percent. Balance sheets grew by about 6.6 percent in 1997, and a further 2.9 percent to mid-year 1998, in line with the long-term trend. Leading this growth was the expansion of capital accounts, which increased at an average annual rate of more than 14 percent. The Bank for International Settlements (BIS) estimates that the capital adequacy ratios of Saudi banks as a group are upward of 16 percent, more than twice the BIS minimums.

The Saudi Arabia stock market is by far the largest in the Middle East, with a capitalization exceeding $50 billion. The World Bank has given the Saudi market high marks for its efficiency, transparency, and quality of regulation. Except

for investment by GCC nationals in selected shares, and a single closed-ended fund, the Saudi market is largely closed to foreign investors. New measures to open the market are under review. Clearly, even small steps in that direction would buoy investor confidence. An even more aggressive opening could bring about the re-rating of the market, where investors come to evaluate share prices in terms of their relationship to earnings growth expectations, as opposed to the prevailing approach that focuses on dividend yields.[19]

This is an interesting sector in that expenditures associated with both the public and private sectors are highly significant in the longer term. Furthermore, and based on the expanded size of the long-term coefficient, there is clear evidence that these links are increasing with time. The short-run effects of public and private expenditures are also generally quite strong, especially the aggregate figures of total budgetary expenditures for the public sector and total private-sector expenditures for the private sector. Several of these patterns carry over into the sector's link with non-oil output. In particular, private-sector GDP has achieved strong links to the sector, in both the short and the long term. These links also appear to be strengthening with the size of the long-term coefficient, more than doubling (0.18 to 0.38) between 1964–89 and 1974–98. Still, there is evidence that links with public-sector GDP, while strong, are weakening a bit. Although public-sector GDP had a statistically significant short-run impact in the earlier period, the latter period showed no such link. Moreover, the long-run impact of the sector on public-sector GDP declined, with the size of this coefficient falling from 0.38 to 0.21.

Summing up, the sector as a whole appears to be gradually more dependent on private-sector activity, in terms of both direct demand and output. While the public sector still plays a major role, there is no reason to expect a reversal of these patterns in coming years.

The Service Sector—Community, Social, and Personal

This is a diverse sector that has experienced relatively rapid growth in recent years. Like the finance sector, it has established a number of links with the public and private areas. The public sector's immediate expenditure stimulus appears to be weakening a bit. In recent years, public consumption, investment, total non-defense allocations, and, possibly, total budgetary allocations have all lost their respective abilities to provide a short-run stimulus to the sector. Yet, defense expenditures have maintained their strong short-run ties to the sector, while longer-term linkages are strengthening. Specifically, there has been an increase in the statistical importance of the long-run coefficient associated with public consumption, non-defense expenditures, and total budgetary allocations. At the same time, there has not been a significant change in the value of the long-run coefficients relative to the earlier (1964–98) period.

In contrast to the public sector, private sector consumption and total expenditures have maintained their strong short-run links to the sector. In addition, they have experienced the same stability over time in their long-run coefficients. It should be noted that the size of these coefficients are considerably larger, expenditure category by expenditure category, than those associated with public

sector expenditures. This suggests, of course, that "riyal-for-riyal" private sector expenditures have a considerably greater long-run impact than those associated with public sector activity. This same pattern carried over to the links between the various categories of non-oil output and the service sector. As with private expenditures, all major categories of non-oil output experienced strong and continuous short-run links with service output. Output's longer-term impacts also showed considerable stability, with the size of the public sector's coefficient increasing significantly (0.13 to 0.23). It should be noted, however, that as with expenditures, the private sector appears to be considerably more efficient in stimulating longer-run output.

Summing up, the various components of non-oil GDP have shown considerable change over time. Each sector has moved up the scale of integration (Table 9.5). These patterns confirm the hypothesis that the government's development strategy to date has been successful in creating an environment conducive to sustained growth in the non-oil portions of the economy (Figure 9.1).

Factors Affecting Private Sector Expenditures

While the previous sections have documented the increasingly important role of private sector expenditures in stimulating sectoral output, it is not completely clear, as noted earlier, that the private sector itself is all that independent of a steady infusion of funds originating from various government budgetary categories. Clearly, if the source of private expenditures is largely from public rather than private output, the ability of the private sector to provide adequate purchasing power independently of developments in the oil sector would be greatly reduced.

Total Private Expenditures

Combining private consumption and investment provides a summary figure for private sector activity. Without a doubt, public sector expenditures have had a great influence on the pattern of private sector expenditures. Yet, it is quite apparent that that linkage is weakening.

Between 1960 and 1989, the main categories of public expenditure included investment, defense, non-defense, and total budgetary expenditures, which provided a strong short-run stimulus to the private sector. Over time, however, several of these short-run linkages (defense/non-defense and investment) have weakened to the point (1980–98) where they have ceased to operate. More importantly, the longer-run linkages between public and private expenditures are weakening. In 1960–89, public investment, defense, and total public expenditures had formed long-term linkages with private expenditures, and in turn these weakened considerably in the 1975–98 period. By 1980–98, none were statistically significant at the 95 percent level. Surprisingly, changes in oil's contribution to total GDP has not had a significant short-run impact on total private expenditures, even if oil has formed a stable long-term link with private expenditures. Based on the increasing size of this long-run coefficient, this link may well be increasing in importance. Nevertheless, private-production GDP

Table 9.5 Summary of Results

Sector	Time [Classification] Period	Public/Private Linkages
Agriculture		
1964–89	Slight public sector short-run impact, no long-run impact Weak private sector long-run expenditure links, no short-run link No non-oil short-run production link, established long-run production link	[Beginning Stages]
1974–98	No public-sector expenditure impact Creation of strong short- and long-term private expenditure links Strengthening of long-run non-oil production link	[Partial Integration Stage]
Non-Oil Manufacturing		
1964–89	Strong public sector short- and long-term links Strong private expenditure, short- and long-term links Strong non-oil output, short- and long-term links	[Integrated]
1974–98	Significant weakening of public short- and long-term links Slight weakening of private sector demand links Slight weakening of long-run non-oil production links	[Mature]
Mineral/Mining		
1964–89	Several long- and short-run public sector links No short- or long-run private sector links Weak short- and long-run nón-oil production links	[Initial Integration Stage]
1974–98	Slight weakening of public short- and long-term links Development of private short- and long-term links Strengthening of production short- and long-term links	[Integrated Stage]
Construction		
1964–89	Strong long- and short-run links to public investment Short-run link to private investment, no long-run links Strong short- and long-run links to non-oil output	[Initial Integration Stage]

Table 9.5 Summary of Results (*continued*)

Sector	Time [Classification] Period	Public/Private Linkages
Construction (continued)		
1974–98	Strengthening of public investment linkages, weakening public non-investment links Development of private long-term links, weakening of short-term links Strengthening of non-oil short- and long-term production links	[Integrated Stage]
Trade Sector		
1964–89	Strong long- and short-run links to public expenditures Strong long- and short-run links to private expenditures Strong short-run link to non-oil production	[Integrated Stage]
1974–98	Weakening of public sector's short- and long-term links Slight weakening of private sector long-run expenditure links Development of non-oil production links	[Mature Stage]
Power Sector		
1964–89	Moderate short-term, strong long-term public expenditure links Strong long-term, moderate short-term private expenditure links Strong short-term non-oil production links no long-term links	[Integrated Stage]
1974–98	Weakening short- and long-term public expenditure links Slight weakening of private long-term/ short-term links Development of long-term non-oil production links, loss of short-run link	[Mature Stage]
Transport/Communications		
1964–98	Strong short- and long-run public expenditure links Strong short- and long-run private expenditure links Strong short- and long-run non-oil production links	[Integrated Stage]

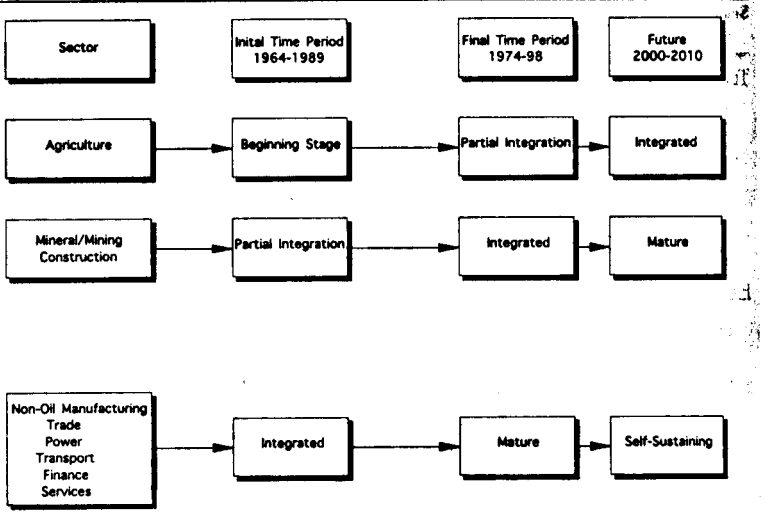
Table 9.5 Summary of Results (*continued*)

Sector	Time [Classification] Period	Public/Private Linkages
Transport/Communications (continued)		
1974 – 98	Weakening of long-run public expenditure links Strengthening of private expenditure long-run links Strengthening of non-oil long-run production links	[Mature Stage]
Finance/RealEstate		
1964–89	Strong short- and long-run public expenditure links Strong short-, no long-run private expenditure links Strong short- and long-run non-oil production links	[Integrated Stage]
1974–98	Strengthening of public long-term expenditure links Strengthening of long-run private expenditure links Maintenance of short- and long-term production links	[Mature Stage]
Service Sector		
1964–89	Strong short-run public expenditure links, Weak long-run links Strong short- and long-run private expenditure links Strong short- and long-run non-oil output links	[Integrated Stage]
1974–98	Weakening short-run public expenditure links, strengthening long-run links Maintenance of long-run private expenditure links Maintenance of short-, slight strengthening of long-run non-oil output links	[Mature Stage]

has maintained strong short-run links to expenditure, and in addition, the longer-run links are highly significant and are strengthening with time.

It should be noted that the relative size of the private sector output coefficient dwarfs that associated with the oil sector. This suggests that while developments in the oil sector continue to have an important impact on private sector expenditures, they may account for a fairly low percentage of the year-to-year movement in this series.

Figure 9.1 Saudi Arabia: Evolution of the Non-Oil Economy, 1964–



Private Investment

Following Hirschman's unbalanced growth strategy,[20] the Kingdom's planners have attempted to stimulate private sector activity through developing and extending major infrastructure projects.

Between 1960 and 1989, this strategy appeared to be paying high dividends, with a strong short- and long-term link to private capital formation. Over time, however, this link has been severed to the extent that by 1980–98 no statistically significant links existed between the two forms of investment. This weakening is not really related to the sharp decline in public investment in recent decades. Rather, it simply signifies that public investment has become much less effective in stimulating follow-on private sector activity. A somewhat similar pattern has occurred with defense, non-defense, and total public expenditures. These began (1960–89) with strong linkages and finished (1980–98) with little influence on private capital formation decisions. The links between output (oil GDP and private sector GDP) and private investment are interesting in that oil GDP has not had much of an effect on the private sector's pattern of short-run investment. Again, and over time, private investment has adjusted to developments in the oil sector. In contrast to its links to the oil sector, private investment has been stimulated by short-run movements in private GDP, as well as adjusting to the expansion over time in that series.

As noted earlier, it should be clear that based on the size of the long-run coefficient, private investment responds much more dramatically to changes in private sector GDP than to changes in oil GDP.

Private Consumption

Since private consumption is the major component of private expenditures, the observed patterns are similar to those described above. Initially, public-sector expenditures across the board provided a strong short- and long-run impetus to this expenditure category. With time, these links have weakened to the point that, with the possible exception of short-run shocks associated with total budget allocations, private consumption patterns are affected by developments outside those controlled by the public sector. Therefore, private sector GDP appears to be a major factor determining the extent to which private sector consumption evolves over time. Yet, it is apparent that these lines are not nearly as strong as those associated with total private sector expenditures.

Conclusions

The findings of this study have a number of implications for Saudi Arabia's future growth. In a sense, the results suggest that the Kingdom's development strategy of diversification has been a success. The private sector appears to be playing a more productive role with time in that many of the non-oil sectors appear capable of sustained growth without a steady infusion of government expenditures. More importantly, it is clear that the private sector is not just filling a vacuum left by the contraction in government expenditures.

However, there are several negative sides to these findings. First, if the private sector stumbles, it is not clear that the public sector will have the ability (even with increased funding) to jump-start the economy and sustain growth until private activity recovers. That growth will have to rely more and more on private sector activity and less on fiscal stimulus provided by the various types of government allocations. While effective in the past, these expenditures, with several exceptions, appear to no longer have a major impact on many of the key non-oil sectors of the economy. The underlying causes of the shifts in relative economic power are difficult to pinpoint, at least within the scope of the present study. Several plausible explanations exist for this development. As noted above, Middle Eastern countries with high (and sustained) levels of defense expenditures are beginning to pay the price for cutting back on economic expenditures to fund their military burdens. One might speculate that the defense-driven shift of Saudi expenditures away from economic to non-economic allocations has weakened the direct economic strength of public expenditures.

Another possibility is that the changing domestic and world environment requires a different composition of policies/expenditures and that perhaps many of the ongoing programs have simply hit diminishing returns. For example, it is clear that recent technological revolutions and the importance of rapid exchanges of massive amounts of information are incompatible with a state-led economy. In addition, the diversification of the economy has reached a point where Riyadh must consult with private sector leaders on the breadth and depth of any policy or—as was the case with the failed 1988 attempt to tax foreign businesses—suffer public embarrassment as well as the potential loss of valuable investment/technology.

A variant of this explanation is that while there has been a shift away from direct subsidies, in favor of an attempt to rely more on market-driven solutions, it is not apparent that Riyadh has fundamentally altered the manner in which it designs and carries out its economic programs. Ideally, as the private sector evolves from one stage to another (beginning stages, partial integration stage, integrated stage, mature stage), government policies would also shift in a manner designed to capitalize on their capability to tap private sector resources.

The second negative aspect of these results is that once the mature stage is reached, there is no assurance that the private sector, on either the expenditure or the production side, will be able to maintain established links. Weakening of private links has apparently occurred in the non-oil manufacturing, trade, and power sectors. Again, the co-integration/error-correction analysis cannot pinpoint the exact cause of this phenomenon. Still, there is no doubt that government regulations may have stifled investment and limited the ability of firms to adapt to changing circumstances. Over time, restrictive government programs might well weaken ties between private sector demand and non-oil sector output.

In particular it is safe to say that with a freer flow of international investment and market access, non-oil output might have performed even better than it did. An encouraging sign are a series of economic reforms initiated in 1998.[21] First, telecommunications was corporatized in spring 1998 as a prelude to a sell-off; a decision to merge all electricity companies as the first step in a similar process was approved in November of the same year. The electricity reforms included tariff increases that will reduce consumer subsidies and help limit the huge losses run up by the electricity companies. Operations at the ports and some local services were turned over to the private sector as well. A revised, less restrictive foreign investment code has been enacted.

Clearly, the key to the country's economic future is the manner in which economic reforms proceed. One observer has noted that the "dance" of Saudi economic reform often resembled a waltz—slow, slow, quick, quick, slow.[22] Yet, the numerous announcements made since mid-October 1999 suggest that reforms, such as the foreign investment initiatives noted above, are now well into the implementation phase. The mutual fund market has been opened to foreign investors, and non-Saudis will be allowed to own real estate and take unpenalized majority stakes in local joint ventures. The sixth round of negotiations for membership in the World Trade Organization (WTO) is moving forward, privatization is seen as a strategic choice, and, most importantly, the tax regime is under review for radical change.[23]

Expanded inflows of foreign investment are critical. Levels of foreign investment in the Kingdom have been very low in recent years. In 1996 and 1997, there were net foreign capital outflows of $1,877 million and $1,129 million respectively. Cumulative inflows in 1984–87 totaled a mere $4,317 million, compared to $36,020 million in Malaysia or $51,412 million in Singapore—both countries with smaller GDPs than Saudi Arabia's. Analysts who point to the punitive Saudi tax system and a restrictive regulatory environment as the main factors responsible for this poor performance agree that recently

promised reforms could do much to reverse the trend and attract capital to the country.[24]

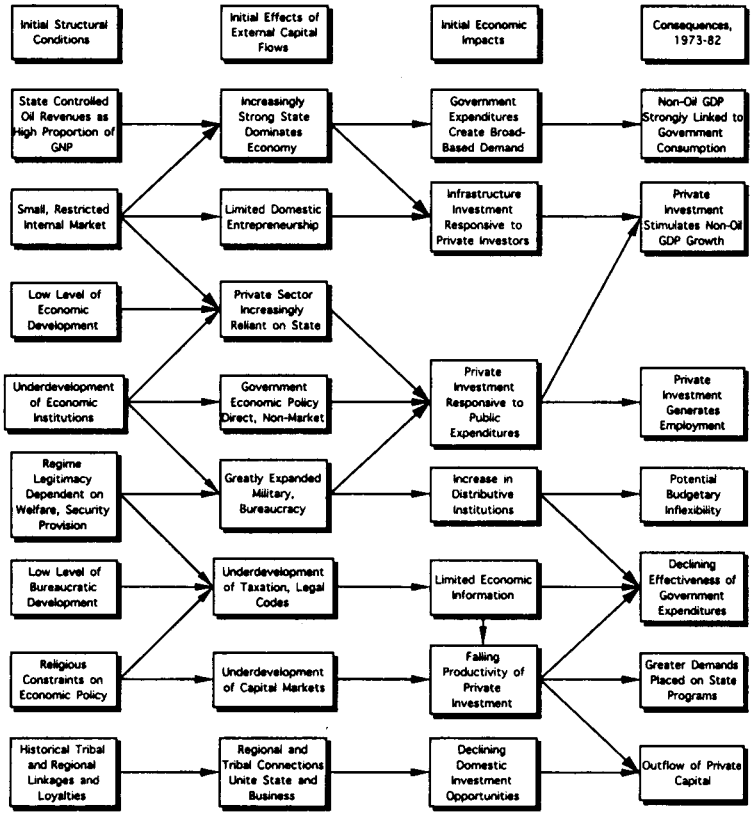
The empirical results presented above show that the private sector is capable of forging strong links to the non-oil economy. However, the results also indicate that in the mature phase into which some sectors (manufacturing, trade, power, for example) are moving, these links may also be weakening. What Saudi Arabia needs to do is draw on the progress made to date through developing a virtuous cycle. Specifically, the Saudi share market is already well managed, but it currently lacks the necessary depth or liquidity. A virtuous circle needs to be developed in which open capital markets, with a strong regulatory framework, can support the rapid growth of private sector investments. Higher levels of foreign direct investment (FDI) will be facilitated and will encourage further growth, of markets as well. It is through mechanisms like this that the process of increased private sector integration can be strengthened and extended to the next stages of self-sustained development.

Perhaps most importantly, the error-correction results noted above, together with the distinct possibility of developing a virtuous cycle, allow one to be much more optimistic about the Kingdom's economic prospects. Several years ago, the conventional wisdom was that the oil boom years produced an economic expansion that was not sustainable. The key components of this line of argument are laid out in Figure 9.2, which shows the close links between government expenditures and private investment, with non-oil output strongly linked to government consumption. The key element here is the declining effectiveness of government expenditures in stimulating output. Still, with high levels of government expenditure, the economy was able to expand during this period, with many of its structural weaknesses masked behind expanding budgetary allocations. Falling profitability of private investment and an apparent increase in capital outflows were ominous signs of what was to follow the end of the boom.

As noted, the conventional interpretation (Figure 9.3) of the economy during the post–oil boom years was quite pessimistic. Here, the focus has been on budgetary cutbacks, the seeming inability of the government to push through economic reforms, increased public sector debt, the drying up of credit to the private sector, capital outflow, and declining rates of private sector capital formation.[25] The conventional wisdom usually concluded that nothing positive was occurring in the non-oil economy. Furthermore, the non-oil economy would not be able to overcome mounting obstacles and constraints impeding its growth. The end result of this process were few accomplishments in terms of economic diversification and self-sufficiency. Instead, the economy was said to face years of increased unemployment, declining incomes, and eventual political and social instability.

The error-correction results noted above paint a somewhat different picture. Despite the decline in government expenditures, and the relatively slow pace of economic reforms, the private sector was still able to evolve in a positive manner, forging a complex set of links to key non-oil economic segments. At the same

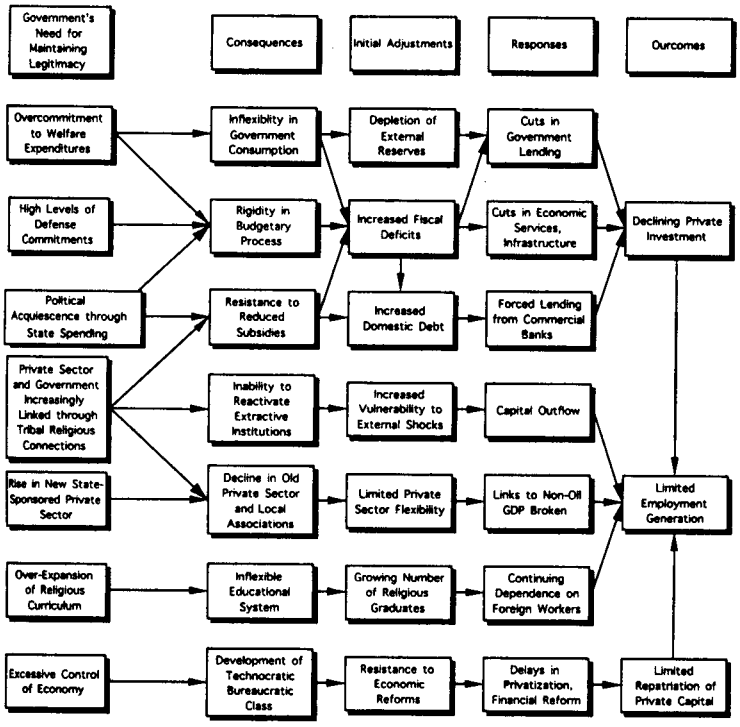
Figure 9.2 Development Model 1: Saudi Arabian Development during the Oil Boom Years



Source: Looney (1997, p. 49)

time, the private sector appears to have reduced its extreme dependency on governmental expenditures and direct subsidies. These developments and their possible causes are summarized in Figure 9.4. As for the future, a possible virtuous cycle model (Figure 9.5) may well allow the Kingdom to take advantage of rapid growth patterns.

Figure 9.3 Development during the Post–Oil Boom Years: Pessimistic Assessment



Source: Looney (1997, p. 50)

Figure 9.4 Development during the Post–Oil Boom Years: Optimistic Assessment

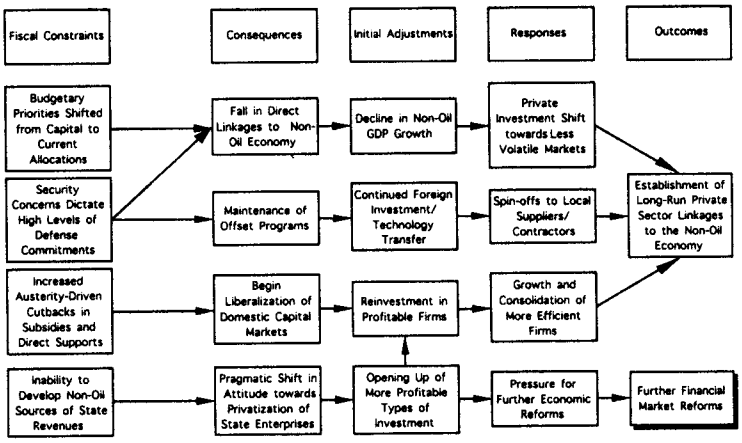
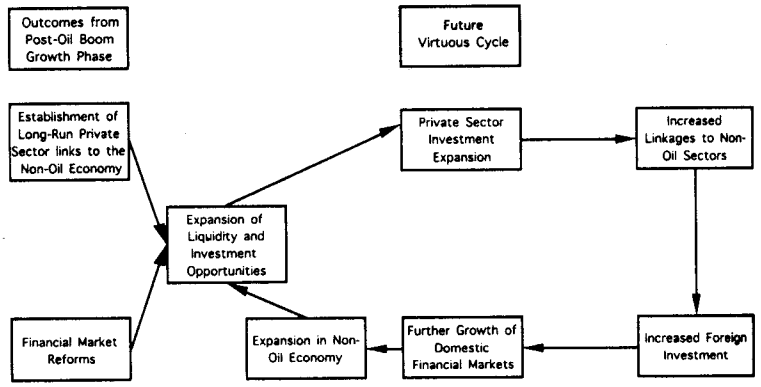


Figure 9.5 Saudi Arabia: Future Virtuous Cycle



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